Class Tasks 4.12 Suggested Answers

Lesson 4.12.1 & 4.12.2
Relational and Logical Operator Activities

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Class Tasks 4.12 Suggested Answers

Lesson 4.12.3
If Statement
Activities

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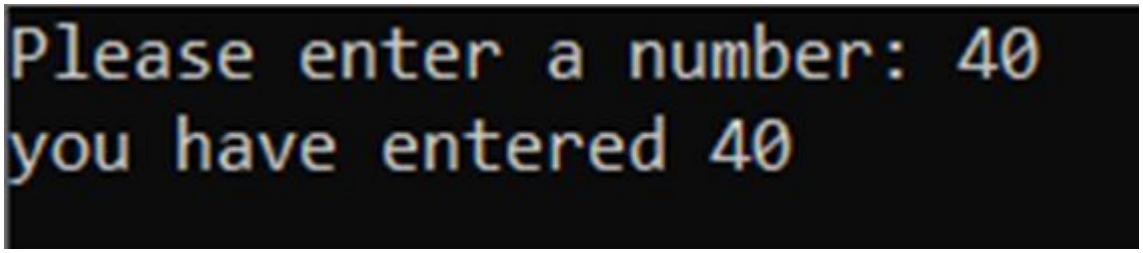
Question 12.3.1 – Programming EASY

- Create an integer Variable userNum.
- Allow the user to enter a number.
- If the number is equal to 40, print “this is 40” otherwise don’t do anything.
- Pseudocode your answer first.
- The output should be exactly this:



TIME ALLOWED: 5 Mins

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Code Answer

```
'Declare a variable
Dim userNum As Integer

'Write out to the user
Console.Write("Please enter a number: ")

'Parse the string input into a number
userNum = Integer.Parse(Console.ReadLine())


'If the input = 40
If userNum = 40 Then
    Console.WriteLine("you have entered 40")
End If
```

Pseudocode Answer

```
Int userNum

userNum = (int INPUT(“please enter a number”))

IF userNum equals 40 THEN

      PRINT( "You have entered 40")

END IF
```

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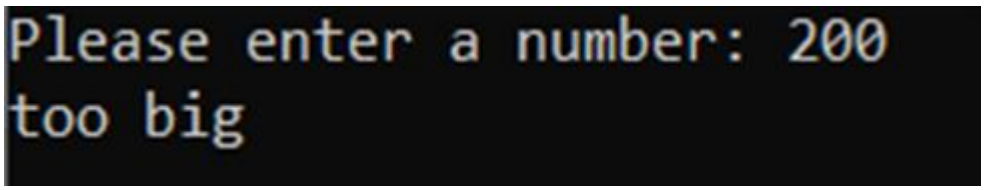
Question 12.3.2 – Programming EASY

- Create an integer Variable userNum.
- Allow the user to enter a number.
- If the number is bigger than 100, print out “too big” otherwise don’t do anything.
- Print out the results to the console.
- Pseudocode your answer first.
- The output should be exactly this:



TIME ALLOWED: 5 Mins

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Code Answer

```
'Declare a variable
Dim userNum As Integer

'Write out to the user
Console.Write("Please enter a number: ")
'Parse the string input into a number
userNum = Integer.Parse(Console.ReadLine())


'If the input = 40
If userNum > 100 Then
    Console.WriteLine("too big")
End If
```

Pseudocode Answer

```
Int userNum

userNum = int (INPUT(“please enter a number”))

IF userNum > 100 THEN

      PRINT( "too big")

END IF
```

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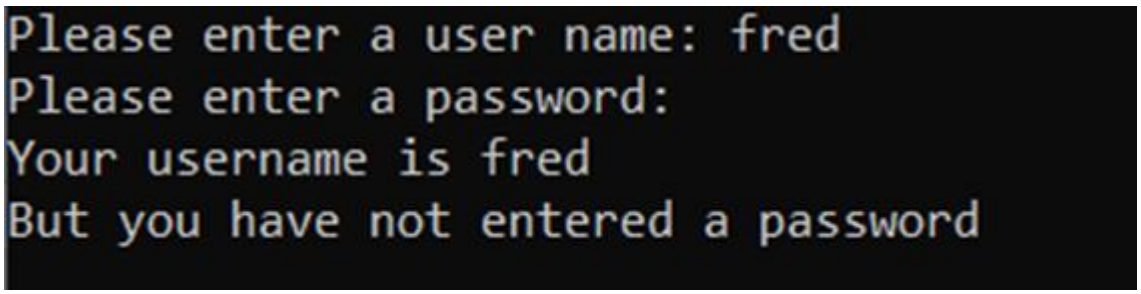
Question 12.3.3 – Programming MEDIUM

- Allow a user to enter a username and password.
- Your program check that a password has been entered.
- If no password has been entered, you will display the following error message.
- Pseudocode your answer first.
- The output should be exactly this:



TIME ALLOWED: 10 Mins

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Code Answer

```
        'declare our variables
        Dim userName As String
        Dim passWord As String

        'write out to the user
        Console.Write("Please enter a user name: ")
       'store the input in a variable
        userName = Console.ReadLine()

        'write out to the user
        Console.Write("Please enter a password: ")
        'store the input in a variable
        passWord = Console.ReadLine()



        'if the input is EMPTY
        If Equals(passWord, "") Then
            Console.WriteLine($"Your username is {userName}")
            Console.WriteLine("But you have not entered a password")
        End If
```

Pseudocode Answer

```
String userName, passWord

userName =  INPUT("please enter a user name")

passWord =  INPUT("please enter a password")


IF password == "" THEN

      PRINT( "your user name is " + userName)

      PRINT("But you have not entered a password.")

END IF
```

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Question 12.3.4 – Programming MEDIUM

- Allow a user to enter a username and password.
- Your program check to make sure that BOTH a username AND a password have been entered.
- You will check your program using the inputs specified in the output screenshot.
- Pseudocode your answer first.
- Test your program with the following values:

```
Please enter a user name: fred
Please enter a password:

Please enter a user name:
Please enter a password: 12345

Please enter a user name:
Please enter a password:
you have not entered either a username or a password
```

TIME ALLOWED: 10 Mins

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Code Answer

```
'declare our variables
Dim userName As String
Dim passWord As String

'write out to the user
Console.Write("Please enter a user name: ")
'store the input in a variable
userName = Console.ReadLine()

'write out to the user
Console.Write("Please enter a password: ")
'store the input in a variable
passWord = Console.ReadLine()

If Equals(passWord, "") AndAlso Equals(userName, "") Then
            Console.WriteLine("you have not entered either a username or a
password")
End If

Console.WriteLine()
```

Pseudocode Answer

```
String userName, passWord

userName = INPUT(“please enter a user name”)

passWord = INPUT(“please enter a password”)


IF password == “” AND username == “” THEN

      PRINT(“you have not entered either a username or a password”)

END IF
```

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Question 12.3.5 – Programming CHALLENGING

- Allow a user to enter a username and password.
- Your program will detect if anything is missing.
- Your program will display **ONE AND ONLY ONE** error message to the user.
- Pseudocode your answer first.
- Test your program with the following values:

```
Please enter a user name: fred
Please enter a password:
you have not entered a password

Please enter a user name:
Please enter a password: 1234
you have not entered a userName

Please enter a user name:
Please enter a password:
you have not entered EITHER a userName or a password
```

TIME ALLOWED: 10 Mins

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Code Answer

```
        'declare our variables
        Dim userName As String
        Dim passWord As String

        'write out to the user
        Console.Write("Please enter a user name: ")
       'store the input in a variable
        userName = Console.ReadLine()

        'write out to the user
        Console.Write("Please enter a password: ")
        'store the input in a variable
        passWord = Console.ReadLine()


        'ONLY the password is missing
        If Equals(passWord, "") AndAlso Not Equals(userName, "") Then
            Console.WriteLine("you have not entered a password")
        End If


        'ONLY the username is missing
        If Equals(userName, "") AndAlso Not Equals(passWord, "") Then
            Console.WriteLine("you have not entered a userName")
        End If


        'BOTH password AND username are missing
        If Equals(userName, "") AndAlso Equals(passWord, "") Then
            Console.WriteLine("you have not entered EITHER a userName or a
password")
        End If
```

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Pseudocode Answer

```
String userName, passWord
userName =  INPUT("please enter a user name")
passWord =  INPUT("please enter a password")

IF passWord == "" AND userName!= "" THEN
     PRINT("you have not entered a password")
END IF

IF userName == "" AND passWord != "" THEN
     PRINT("you have not entered a password")
END IF

IF password == "" AND username == "" THEN
     PRINT("you have not entered either a username or a password")
END IF
```

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Class Tasks 4.12 Suggested Answers

Lesson 4.12.4
If.. Else Statement
Activities

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